



Session 1 - January 31, 2023, 1-4pm CT Session 2 - February 6, 2023, 1-4pm CT Session 3 - February 14, 2023, 1-4pm CT



Introduction

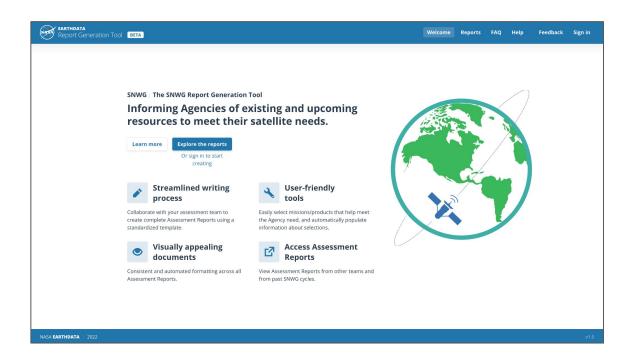
Welcome to the 2022 SNWG RGT Workshop!

Schedule:

- RGT Workshop Session 1 (January 31, 2023, 1-4pm CT)
- RGT Workshop Session 2 (February 6, 2023, 1-4pm CT)
- RGT Workshop Session 3 (February 14, 2023, 1-4pm CT)

RGT Workshop Agenda

- Purpose of the RGT Workshop
- Milestone 5 Refresher
- Workshop Learning Objectives
- Setting up RGT
- RGT Help Tools
- Completing Assessment
 Milestones with RGT and Asana
- Summary
- Post-Workshop Office Hours



Purpose of the RGT Workshop

The purpose of the following RGT Workshop is to:

- Review milestones and provide a refresher for Milestone 5 (Identify New Solutions)
- Familiarize SNWG Assessment Phase participants with how **RGT** (the Report Generation Tool) fits into the assessment process
- Allow participants to practice completing tasks in RGT with the help of a guided walkthrough
 - A "sandbox" has been setup in RGT for this workshop session
 - FOR THIS WORKSHOP...the survey data is from current cycle and the assignments are arbitrary
 - All reports will be cleared after this workshop, so do not be afraid to make mistakes. Questions are welcome!
- Provide training materials and additional resources to assist participants with working in RGT during the assessment

Assessment Schedule (1 of 3)

Timeline	Purpose			
Assessment preparations				
Jun-Sep 2022	SNWG survey completed by Agency SMEs, approved by Agency SES leadership, and sent to NASA			
Jun-Sep 2022	Selection of assessment participants from NASA, NOAA, and USGS			
Sep 22, 2022	NASA HQ kickoff meeting			
Sep 22-Oct 17, 2022	Kickoff sessions with each thematic area			
Preliminary evaluation of Needs				
Oct 6, 2022	*Milestone 1: Review submitted surveys. PSs evaluate if the Needs are placed in the proper thematic area and identify the expertise required to evaluate the Need.			
Oct 14, 2022	*Milestone 2: Assemble assessment teams. PSs designate a single person who is responsible for the evaluation of each Need. Additional R&A, ASP, CSDA, NOAA, or USGS representatives are assigned to Needs according to their expertise.			
Oct 14-Nov 18, 2022	Milestone 3: Schedule agency interviews. IMPACT will handle the scheduling; meanwhile, Assessment teams perform an initial evaluation to determine if the expressed Need is addressed via POR, past SNWG products, or other means.			
	** 1, 1, 1			

*Activity takes place in Asana, the SNWG workflow management tool

Note: The goal is to have all agency interviews on the calendar before Thanksgiving, and to hold as many interviews as possible before the holiday/conference season. Interviews that take longer to schedule (e.g., group interviews with multiple Needs, agencies, and assessment teams involved) may continue into January.

Assessment Schedule (2 of 3)

Timeline	Purpose			
Detailed assessment of Needs				
Oct 14, 2022 - Feb 3, 2023	Milestone 4: Hold agency interviews. This is a key part of the detailed Need assessment. All assessment team members should participate if possible in the discussion of existing and/or potential solutions that help meet the Agency need.			
Oct 14, 2022 - Feb 24, 2023	*Milestone 5: Identify new solutions. Assessment teams review solutions proposed by other assessment teams to identify cross-cutting solutions that benefit multiple Needs/Agencies. Teams can also propose new solutions for review by other assessment teams/thematic areas.			
Jan 2 - Mar 10, 2023	*Cross-thematic area review and prioritization of solutions. Continued cross-pollination and discussion of proposed solutions, along with prioritization by the lead(s) of each thematic area.			
Mar 1-24, 2023	Down-selection of solutions by the Science and Applications Board and Steering Committee. The SNWG Management Office at IMPACT will develop preliminary cost estimates. Further refinement of the solution descriptions will be needed for those being proposed to OMB.			
*Activity takes place in Asana, the SNWG workflow management tool				

Assessment Schedule (3 of 3)

Timeline	Purpose				
Reporting					
Jan 31 - Feb 14, 2023	Report-writing workshops led by the SNWG Management Office.				
Jan 2 - Mar 17, 2023	**Milestone 6: Recommend existing resources. As assessment teams initiate their draft assessment reports, they will select current/future satellite missions, data products, and SNWG activities from past cycles that help meet the Need.				
Jan 2 - Apr 7, 2023	**Milestone 7: Submit draft assessment reports. Assessment teams submit draft reports summarizing each individual Need and describing current/upcoming/proposed resources that help meet the Need.				
Mar 24 - Apr 14, 2023	**Milestone 8: Recommend new cycle solutions. Assessment teams review the final set of refined solutions that will be proposed to OMB and confirm which solution(s) will benefit each submitted Need.				
Mar 1 - Apr 27, 2023	Detailed cost estimates of proposed solutions. This activity is carried out by the SNWG Management Office, with input from the designated POC(s) for each solution being proposed to OMB.				
Mar 1 - May 15, 2023	**Milestone 9: Finalize assessment reports. HQ review and feedback on assessment reports, including any iteration with the assessment team. Reports will also be copy-edited.				
June 1, 2023	Final assessment reports transmitted to SNWG agencies.				
Retrospective					
July/August 2023	Retrospective on SNWG-2022 assessment. A survey and dedicated discussions on what worked and what could be improved, with an eye toward the SNWG-2024 process.				
**Activity takes place in the Report Generation Tool (RGT)					

Satellite Needs Working Group (SNWG)

- The Satellite Needs Working Group (SNWG) seeks to identify the Earth observation needs of U.S. Federal agencies
- SNWG surveys agencies every two years to identify their high-priority Earth observation needs
- After the surveys are received, there is an Assessment Phase in which the survey results are evaluated to bring about viable solutions to Agency needs
 - Previous Assessment Cycles: 2016, 2018, and 2020
 - Current Assessment Cycle: 2022

White House National Science and Technology Council U.S. Group on Earth Observations (USGEO) Satellite Needs Working Group (SNWG)



SDA Principal: Dr. Gerald Bawden, NASA Headquarters

Co-Chair: Dr. Shaima Nasiri, Department of Energy

Co-Chair: Dr. Rick Mueller, Department of Agriculture

Distribute Survey

Gather Inputs

The 20XX Cycle: Assessment

SNWG develops a survey, USGS manages distribution and gathers vetted agency needs.

Vetted responses are provided to USGEO. USGEO provides those surveys to NASA.

NASA, NOAA, and USGS review submissions, assign to review teams, evaluate current capabilities, and propose new solutions.

Appropriations and Selections



Congress makes appropriations available to NASA/ESD for solutions prioritized by the Office of Management and Budget.

The 20XX Cycle: Solutions

Implementation and Stakeholder Engagement

Sustained Operations

Solutions funded and selected go through a complete formulation and peer review of their technical implementation.

As solutions are implemented, collaborations throughout SNWG and NASA solicit stakeholder feedback and offer training.

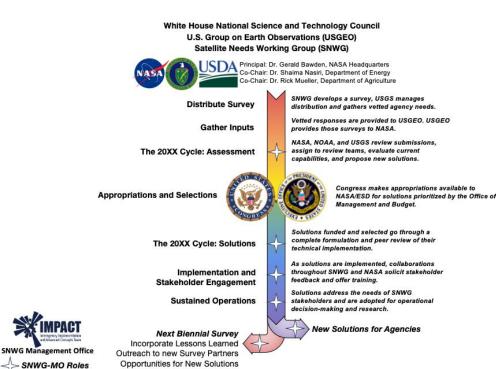
Solutions address the needs of SNWG stakeholders and are adopted for operational decision-making and research.

New Solutions for Agencies

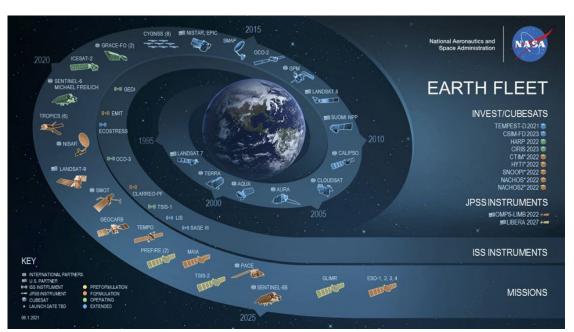
Next Biennial Survey Incorporate Lessons Learned Outreach to new Survey Partners Opportunities for New Solutions

SNWG Management Office at IMPACT

- The SNWG Management Office was spun up during the 2020 SNWG assessment cycle
- SNWG MO role during the assessment:
 - Develop and administer assessment tools
 - Collect and analyze data for reporting on surveys and solutions
 - Serve as POC for assessment teams
- SNWG MO role during solution implementation:
 - Manage agreements and schedules
 - Monitor and report solution status
 - Ensure sustained generation of new products
 - Stakeholder engagement with SNWG agencies



SNWG Assessment Phase



During the Assessment Phase, NASA and other Earth observation data providers (e.g. NOAA, USGS) evaluate the needs identified in the survey responses by:

- Identifying current or upcoming satellite missions that could meet those needs
- Determining whether multiple agencies need the same types of products
- Considering development of new data products using existing satellite Earth observation data sources

https://science.nasa.gov/earth-science

SNWG Assessment Outcomes

Highlights of end Products and Programs developed from needs identified during previous SNWG Assessment Cycles:

- Catalog of Archived Suborbital Earth Science Investigations (<u>CASEI</u>) 2016 Cycle
 - An easy access archive of detailed information about NASA's Earth science airborne and field campaigns
- Harmonized Landsat Sentinel-2 (<u>HLS</u>) Products 2016 Cycle
 - A collection of surface reflectance data products blending data from Landsat and Sentinel-2 to provide near-global medium to high resolution Earth surface data every 2-3 days
- Ice, Cloud & Land Elevation Satellite-2 (<u>ICESat-2</u>) Quick Look Products 2018 Cycle
 - Global elevation data products generated using data from the Advanced Topographic Laser Altimeter System (ATLAS), providing detailed information about Earth's surface/atmospheric features
- Observation Products for End-Users for Remote Sensing Analysis (<u>OPERA</u>) 2018 Cycle
 - Satellite data products designed to meet federal Agency needs identified during the SNWG 2018 Assessment
 Cycle (Surface Water Extent, Surface Disturbance, Surface Deformation)
- Global HLS-Derived Vegetation Indices Suite 2020 Cycle
 - Suite of vegetation indices generated for HLS data products to aid in the assessment of global vegetation characteristics
- Air Quality Forecasts and Distributed Pandora Sensors 2020 Cycle
 - Add air quality sensors at selected U.S. Embassies and at agricultural/rural sites in the U.S. in order to improve air quality forecasts at USDA and DoS sites of interest

Refresher: SNWG Assessment Milestones

- There are nine milestones, or steps, that each agency need must undergo in the assessment process
- Milestones 1-5 take place in Asana while Milestones 6-9 take place in RGT
- RGT will be used to collaborate on assessment reports for each need
- This workshop will focus on RGT and the last four 4 milestones

Milestone 1	Review Submitted Survey	Milestone 6	Recommend Existing Resources
Milestone 2	Assemble Assessment Team	Milestone 7	Submit Draft Assessment Report
Milestone 3	Schedule Agency Interview	Milestone 8	Recommend New Cycle Solutions
Milestone 4	Hold Agency Interview	Milestone 9	Finalize Assessment Report
Milestone 5	Identify New Solutions		

Assessment Roles

There are many roles involved in the SNWG Assessment Phase, each with a unique set of responsibilities:

- HQ Lead
- HQ Management
- Program Scientist (PS)
- Thematic Area Lead (TAL)
- Assessment Lead
- Research & Analysis (R&A) Representative
- Applied Sciences Program (ASP) Representative and Lead
- Commercial Smallsat Data Acquisition (CSDA) Representative and Lead
- NOAA Representative and Lead
- USGS Representative and Lead
- SNWG Management Office/IMPACT Representative
- Copy Editor

*Note: "<u>Assessment team</u>" is used throughout the document to refer to these roles collectively

Note: Roles are color-coded for quick identification in the <u>RGT User's Guide</u>

Assessment Thematic Areas

Need IDs (survey responses) are categorized using the following thematic areas:

- Atmospheric Composition
- Carbon Cycle & Ecosystems
- Disaster Response
- Earth Surface & Interior
- Land Cover/Land Use Change
- Oceans & Cryosphere
- Water & Energy Cycle
- Weather & Atmospheric Dynamics
- Other/Infrastructure Products

These thematic areas are a combination of NASA Focus Areas and Programs that reflect the geophysical observables typically needed by Federal agencies.

Lessons Learned from 2020 SNWG Assessment

- In summer 2020, a Lessons Learned survey was sent to all assessment participants seeking feedback on:
 - Assessment process
 - Tools
 - Time spent completing various phases of the assessment
- A series of 13 retrospective discussions were held with participants from each R&A Focus Area, ASP, CSDA, ESDIS, NOAA, and USGS

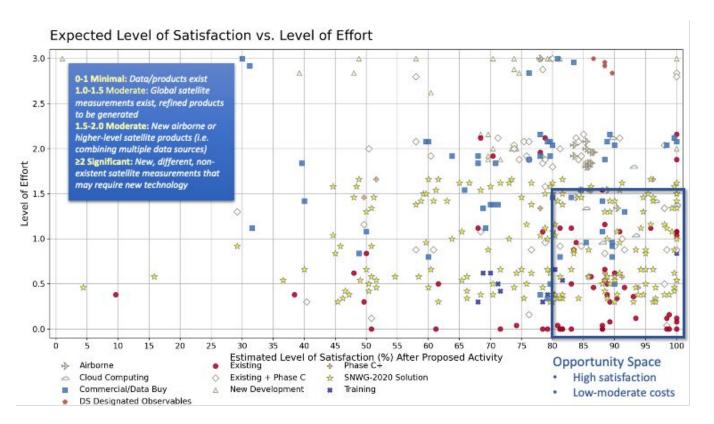
Outcomes from Lessons Learned that will be addressed using new assessment tools:

- Establish a workflow management tool to enable **S**chedule, **C**ommunication, **R**eporting, **I**nformation, and **P**rocess **T**racking, including providing clear next-step guidance
- Increase transparency in assessment process, enabling all participants to view, discuss, and cross-pollinate when identifying proposed solutions to meet Agency needs
- Develop tools between assessment cycles, allowing time for user testing, and introduce tools via workshops
- Automate progress tracking as much as possible
- Utilize tools accessible to all assessment participants, including USGS and NOAA partners

Refresher: What are Solutions?

- Solutions are activities NASA, NOAA, and/or USGS could undertake to meet the needs identified in each survey.
 Solutions could involve:
 - New mission, technology, product, or infrastructure
 - Modification of an existing product, SNWG product, or infrastructure
 - An airborne or field campaign with NASA-specific platforms
 - On-demand processing or cloud capabilities
 - Training in data use
 - Commercial data access
 - Model development
- Examples of solutions from past SNWG cycles include:
 - Catalog of Archived Suborbital Earth Science Investigations (CASEI)
 - Harmonized Landsat Sentinel-2 (HLS) Products
 - Observation Products for End-Users for Remote Sensing Analysis (OPERA)
 - TEMPO/GOES near real-time products

Refresher: Successful Solutions



Most successful solutions will have low level of effort, high anticipated level of satisfaction, and benefit multiple needs.

Successful solutions from past cycles are described more here:

https://www.earthdata.n asa.gov/esds/impact/sn wg/solutions

Refresher: Milestone 5: Identify New Solutions



- Description: The goal of Milestone 5 is to gather proposed solutions that could meet the needs identified by each Need ID.
 Proposed solutions are submitted through a form where each solution is associated with at least one Need ID. Identification of further Need IDs that benefit from a proposed solution, as well as prioritization and cross-thematic area discussion of proposed solutions, will take place in Asana. It is highly encouraged to communicate within your thematic area to identify solutions that meet multiple needs.
- Checklist:
 - ☐ Assessment team associates Need ID tags with solutions
 - Note: each Need ID should be tagged to at least one solution
 - □ Assessment team fills out Need Solution Form
 - □ Assessment team estimates agency level of satisfaction
 - Assessment Lead completes milestone
- Resources: See the Asana User's Guide and Demonstration Video

Check-in Time!

Rate your comfort with using Asana so far, on a scale of 1 to 3, and drop your current number in the chat. If you write "3" or "?" in the chat, we will pull you to a breakout room for one-on-one support.

- 1: Doing great! Totally comfortable so far.
- 2: Doing okay. Still getting used to it.
- 3: I am struggling and need one-on-one help.

Self-Assessment Questions:

Milestone 5:

The most successful solutions will:

- (a) Have a low level of effort
- (b) Have a high anticipated level of satisfaction
 - (c) Benefit multiple Needs
 - d) All of the above

Break

Self-Assessment Questions:

Milestone 5:

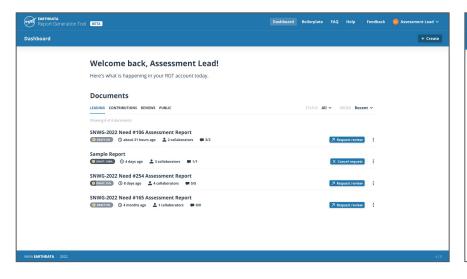
The most successful solutions will:

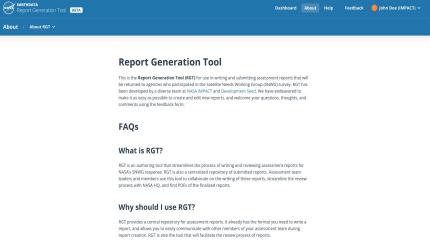
- (a) Have a low level of effort
- (b) Have a high anticipated level of satisfaction
 - (c) Benefit multiple Needs
 - (d) All of the above

Break

What is the Report Generation Tool (RGT)?

- The Report Generation Tool (RGT) is a publication tool derived from the Algorithm Publication Tool (APT) that provides a standardized template for authors to collaboratively generate reports
- RGT will be used to collaborate on assessment reports for each assessment need





RGT Workshop Objectives

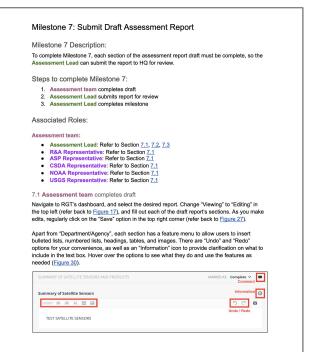
By the end of the workshop, you will know:

- How to log in to RGT
- What your role is in the Assessment Phase
- What milestones you need to complete
- How to create an RGT report
- How to edit and leave comments on a report
- How to recommend resources (for a proposed solution) in RGT
- How to submit a report for review
- Where to find additional resources





- The <u>RGT User's Guide</u> provides a detailed walkthrough and description of each assessment role, what tasks each role is responsible for, and how to complete each task in RGT
 - Color-coded by role
 - o Table of contents includes direct links to each task within a milestone
 - Role-specific instructions for each milestone
- How to Use the RGT User's Guide
 - Identify your role and its associated color under the "SNWG Assessment Phase Roles" section
 - Proceed through the steps in "Setting Up RGT" (if not already setup)
 - 3. For each milestone, read over the "Milestone description", "Steps to complete milestone", and "Associated Roles" sections where you will find the purpose of the milestone, steps involved in the milestone, the roles that are responsible for completing each step, and role-specific links to the instructions for each milestone step
 - a. **Note**: Look for your role's color to quickly locate the tasks associated with your role
 - Use the instructions to complete each milestone associated with your role in RGT



Access an RGT account

- An RGT account has been created on your behalf using the email address/username from your Asana account. You should have received an email notification with your temporarily login credentials (it may be in your "junk" folder).
- Follow the link in the email to login to your RGT account using your temporary login credentials. You will then be directed to reset your password.
 - Type 1 in the chat if you are logged in and your password has been reset
- Need help logging in? **Send a question mark (?) in the chat** to be added to the "Tech Support" breakout room to receive assistance
- See the <u>RGT User's Guide and Demonstration Video</u> for additional instruction



Self-Assessment Questions:

The RGT user's guide is color-coded by what?

Break

<<5:00>>

Self-Assessment Questions:

The RGT user's guide is color-coded by role

Break

<<5:00>>

Milestone 6: Recommend Existing Resources



- Description: Prior to Milestone 6, the assessment Need IDs have been processed in Asana (need surveys reviewed, agency interviews completed, and new solutions identified). As a part of the Assessment team, the goal of Milestone 6 is to start a draft report describing the resources available for each Need ID. Initially, only existing missions and solutions from past SNWG assessment cycles will be available in RGT, but the Assessment team will be notified when new cycle solutions are available for selection.
- Checklist:
 - Assessment Lead creates draft
 - Assessment Lead adds collaborators
 - Assessment team recommends existing resources
 - Assessment Lead completes milestone
- Resources: See the <u>RGT User's Guide</u>

Check-in Time!

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- 2: Doing okay. Still getting used to it.
- 3: I am struggling and need one-on-one help.

Milestone 7: Submit Draft Assessment Report



- Description: Prior to Milestone 7, the Assessment team has drafted a report detailing the resources available for each Need ID.
 The goal of Milestone 7 is to complete each section of the assessment report draft so that the Assessment Lead can submit the report to HQ for review.
- Checklist:
 - Assessment team completes draft
 - Assessment Lead submits report for review
 - Assessment Lead completes milestone
- Resources: See the <u>RGT User's Guide</u>

Check-in Time!

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Break

Self-Assessment Questions:

Milestone 6:

1. How do you add collaborators?

Milestone 7:

- How do you view/manage comments that have been made on a report?
- 2. What button do you select to submit your report for review?

Break

Self-Assessment Questions:

Milestone 6:

1. How do you add collaborators?

Click on "1 collaborators" in top left

Milestone 7:

.. How do you view/manage comments that have been made on a report?

Click on the speech bubble icon in the top left

2. What button do you select to submit your report for review?

"Submit for review" in the top right

Milestone 8: Recommend New Cycle Solutions



- Description: Prior to Milestone 8, the Assessment Lead has submitted the assessment report to HQ for review. The goal of
 Milestone 8 is to adjust the assessment report to include information about solutions proposed in the current cycle to meet agency
 needs. Proposed solutions can evolve during the cross-Thematic Area and HQ review processes. As the Assessment Lead, you
 should review the final scope of each solution down-selected for proposal to OMB and confirm whether that solution will benefit
 each Need ID.
- Checklist:
 - ☐ IMPACT Representative provides information on new cycle solutions
 - ☐ Assessment Lead adjusts draft for new cycle solutions
 - Assessment Lead completes milestone
- Resources: See the <u>RGT User's Guide</u>

Check-in Time!

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- 2: Doing okay. Still getting used to it.
- 3: I am struggling and need one-on-one help.

Milestone 9: Finalize Assessment Report



Description: Prior to Milestone 9, the Assessment Lead has adjusted the assessment report draft to include new cycle solutions. The HQ Lead is notified when a report is ready for review and can recommend any desired changes. The Assessment Lead is then notified of HQ's recommendations and can make adjustments as needed. This process will involve back-and-forth iterations between HQ and the Assessment team. After the iterations are complete, the Copy Editor will review the report and finalize the boilerplate text with the HQ Lead. Once iterations and copy-editing are complete for an assessment report, the HQ Lead will confirm that the report is finalized to complete Milestone 9. The report will then be ready to send to the requesting agency for a particular need.

Checklist:

- HQ Lead reviews assessment report
- Assessment Lead incorporates HQ recommendations
- □ Copy Editor completes copy-edit of assessment report
- ☐ HQ Lead confirms that the report is finalized
- ☐ HQ Lead completes milestone
- Resources: See the RGT User's Guide

Check-in Time!

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Break

Self-Assessment Questions:

Milestone 8:

- 1. How will you be notified of new cycle solutions?
- 2. In which section of a report can new cycle solutions be added?

Milestone 9:

- True or False: You can filter the documents by status to only show reports that are "in review".
- 2. Who is responsible for finalizing the report and completing the milestone?

Break

Self-Assessment Questions:

Milestone 8:

1. How will you be notified of new cycle solutions?

The IMPACT representative will send an email to all participants

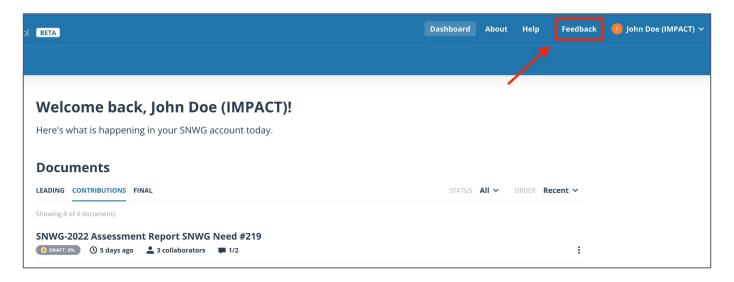
2. "Proposed SNWG activities" is the section of a report where new cycle solutions can be added.

Milestone 9:

- .. True or False: You can filter the documents by status to only show reports that are "in review".
- The HQ Lead is responsible for finalizing the report and completing the milestone.

Need more help with RGT?

Submit your questions and/or feedback by using the Help/Feedback form. This form defaults to the Asana feedback form where
your requests will be addressed by SNWG team members.



Summary

- Stay on after the end of this workshop session for office hours if you are in need of additional assistance or have further questions
- Weekly office hours are available Tuesdays from 3:30-5pm ET on MS Teams (<u>www.tinyurl.com/SNWGOfficeHours</u>)
- The SNWG Management Office is also happy to schedule report-writing sessions for your team. Please have the assessment lead contact us at <u>info@snwg-impact.net</u>.
- Resources:
 - o RGT User's Guide and Demonstration Video
- Please reach out to <u>info@snwq-impact.net</u> with any additional questions or concerns

Thank you.

